

Commuter Rail Plan

Commuter Rail Plan

The following section contains a brief description of the proposed rail system. It includes a map showing the location of proposed new segments of rail and existing rail lines. It also includes a brief description of the rail system's proposed funding sources.

The proposed rail system will consist of approximately 100 miles of new rail line, connecting existing rail lines and existing rail stations. The rail system will be built in phases, starting with the initial segment between Boston and Providence, followed by segments connecting Boston to New Haven, New York, and Washington, D.C.

APPENDIX A contains a detailed description of the proposed rail system, including its proposed funding sources, proposed rail stations, and proposed rail segments.

The rail system will be operated by Amtrak, and will be funded by a combination of state and federal funds.

The rail system will consist of three major rail lines: the New England Central Railroad, the New England Southern Railroad, and the New England Western Railroad. The rail system will also include several smaller rail lines, such as the New England Central Railroad, the New England Southern Railroad, and the New England Western Railroad.

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Georgia Department of Transportation

Commuter Rail Plan

Conclusions

- A multimodal approach to future transportation investments in Northern Georgia is the key to expanding mobility for the region and helping to maintain the economic vitality of the rapidly expanding metropolitan area.
- Issues in Northern Georgia needing solutions include highway capacity limitations, air-quality non-compliance, decentralizing population and employment growth and economic vitality, and a desire to maintain the future growth of a "World Class" Metropolitan area.
- Twelve (12) railroad corridors are available in Northern Georgia to help mitigate these issues through commuter rail.
- A commuter rail plan has been developed based upon an analysis of the travel behavior of the region's citizens, current and future socio-economic projections, freight railroad operations, estimates of ridership and an evaluation of the changes required in the railroad infrastructure to accommodate passenger trains.
- Commuter rail is feasible in six (6) of the Northern Georgia rail corridors as a new transportation mode for the metropolitan area to supplement the existing systems and provide a new regional passenger rail service. A two-phase staging plan will allow implementation of service on three (3) corridors by 2000 and an additional three (3) corridors by 2010.
- Phase 1 can be implemented within four (4) years of the decision to proceed with service to Athens, Senoia and Bremen on three (3) corridors with 20 stations and one (1) downtown transfer station. This will serve over 5,600 riders daily or 11,200 daily work trips (year 2000 estimates.)
 - Service to Athens can include station stops at Emory, Tucker, Lilburn, Reagan Parkway, Lawrenceville, Dacula, Winder and Bogart in Fulton, DeKalb, Gwinnett, Barrow, Oconee and Clarke Counties.
 - Service to Senoia can include station stops at East Point, Red Oak, Tyrone and Peachtree City in Fulton, Fayette and Coweta Counties.

- Service to Bremen can include station stops at Mableton, Austell, Douglasville, Villa Rica and Temple in Fulton, Cobb, Douglas, Carroll and Haralson Counties.
- Phase 1 will require an estimated capital investment of \$218 million:
 - \$94 million for rolling stock (diesel locomotives and bi-level cars), and
 - \$124 million for stations, station facilities, improvements to the right-of-way to permit reliable mixed passenger and freight operation, storage and maintenance facilities and equipment.
- Phase 1 will require operating assistance of approximately \$10 million per year.
- Implementation of Phase 2 could include initiating service on three (3) additional corridors and extensions, with 22 additional stations serving six (6) additional counties and 6,400 additional riders or 12,800 additional daily work trips (year 2010 estimate.) Staged service to Madison, Gainesville, and Canton should be part of the implementation plan:
 - Service to Madison can include station stops at Avondale, Stone Mountain, Lithonia, Conyers, Covington, and Social Circle in DeKalb, Rockdale, Newton, Walton and Morgan Counties.
 - Service to Gainesville can include station stops at Lenox, Norcross, Duluth, Suwanee, Sugar Hill and Oakwood in Fulton, Gwinnett and Hall Counties.
 - Service to Canton can include station stops at Cumberland Mall, Marietta, Sandy Plains Road and Holly Springs in Cobb and Cherokee Counties.
- Phase 2 will require additional investment of \$263 million in capital costs and an additional annual operating assistance of \$8 million. Capital costs are:
 - \$114 million for rolling stock (locomotives and bi-level cars), and
 - \$119 million for stations, station facilities, improvements to the right-of-way to permit reliable mixed traffic with freight trains, storage and maintenance facilities, and equipment, and
 - \$30 million for expansion of common facilities.

When fully implemented, commuter rail service will stop at 40 stations in 18 Counties with an estimated year 2010 population of 4,213,330 which is 76% of the total 50 County study area year 2010 population of 5,572,730 (which is 68% of the statewide year 2010 population of 8,213,927.) The population of the 18 Counties served is expected to be more than 50% of the year 2010 State of Georgia population. In current dollars the cost of the overall plan for 2010 levels of ridership is \$481 million with annual operating support of \$18 million per year.

Northern Georgia commuter rail service will be powered by diesel passenger locomotives and some cars will be equipped with control cabs so that trains can be operated in either push or pull direction.

- Passenger cars will be bi-level with high capacity, comfortable seating on both levels. Handicapped accessibility will be provided by mini-high platforms at the end of regular platforms.
- Each corridor will have three (3) morning and three (3) afternoon peak period trains. Mid-day and evening service will also be provided on each corridor for commuters with flexible schedules.
- Stations will be easily accessible from a variety of other modes. Parking will be provided at stations for a high percentage of passengers to avoid constraints on the system's use.
- Tickets will be sold from vending machines at outlying stations and manned ticket windows at the downtown transfer station. One-way, round trip, weekly and monthly ride tickets will be sold and mail service will be available for regular monthly purchases. Credit and debit cards will be accepted.
- Typical daily one-way commuter fares will range from \$1.50 at close-in stations such as Emory to as much as \$5.50 at the farthest stations such as Madison.

Investment in commuter rail will benefit the regional economy, increase private productivity, create jobs and dollars, reduce air pollution and increase regional mobility/capacity.

- Downtown Atlanta will remain strong as the economic center of the region.
- Property values will increase near station locations and along the commuter rail corridors.
- Public transit investments are twice as effective as highway investments in their private sector productivity impact.

- Phase 1 and 2 will create over 10,000 jobs and a total payroll of more than \$500 million dollars.
- Commuter rail service in the Northern Georgia area will help reduce polluting emissions of hydrocarbons, carbon monoxide and nitrogen oxides.
- The commuter rail plan will provide the equivalent capacity of six (6) lanes of highway in the center of the region, which could cost approximately \$285 million dollars in highway construction costs, not including right-of-way and the economic loss of property taken.

- Much remains to be done:

- Determining responsibility for implementing the Plan in areas of design and design supervision, construction, equipment acquisition, financing and operating the commuter rail system.
- A long-term financing program must be agreed to by local, regional and Statewide officials. A regional or Statewide transportation development sales tax offers one potential source of funds and can be explored.
- Comprehensive agreements with the railroads -- CSX, the Georgia Northeastern and Norfolk Southern -- will be required concerning capital investments to initiate the service, maintain and operate it.

January 19, 1995

Briefing

Georgia Department of Transportation

Commuter Rail Plan



Georgia's Transportation Future

- Emerging Requirements for Multimodal Options

Limits on new highway capacity, increased use, more recreational travel, economic development, air quality, energy limits, national linkages, high speed ground transportation

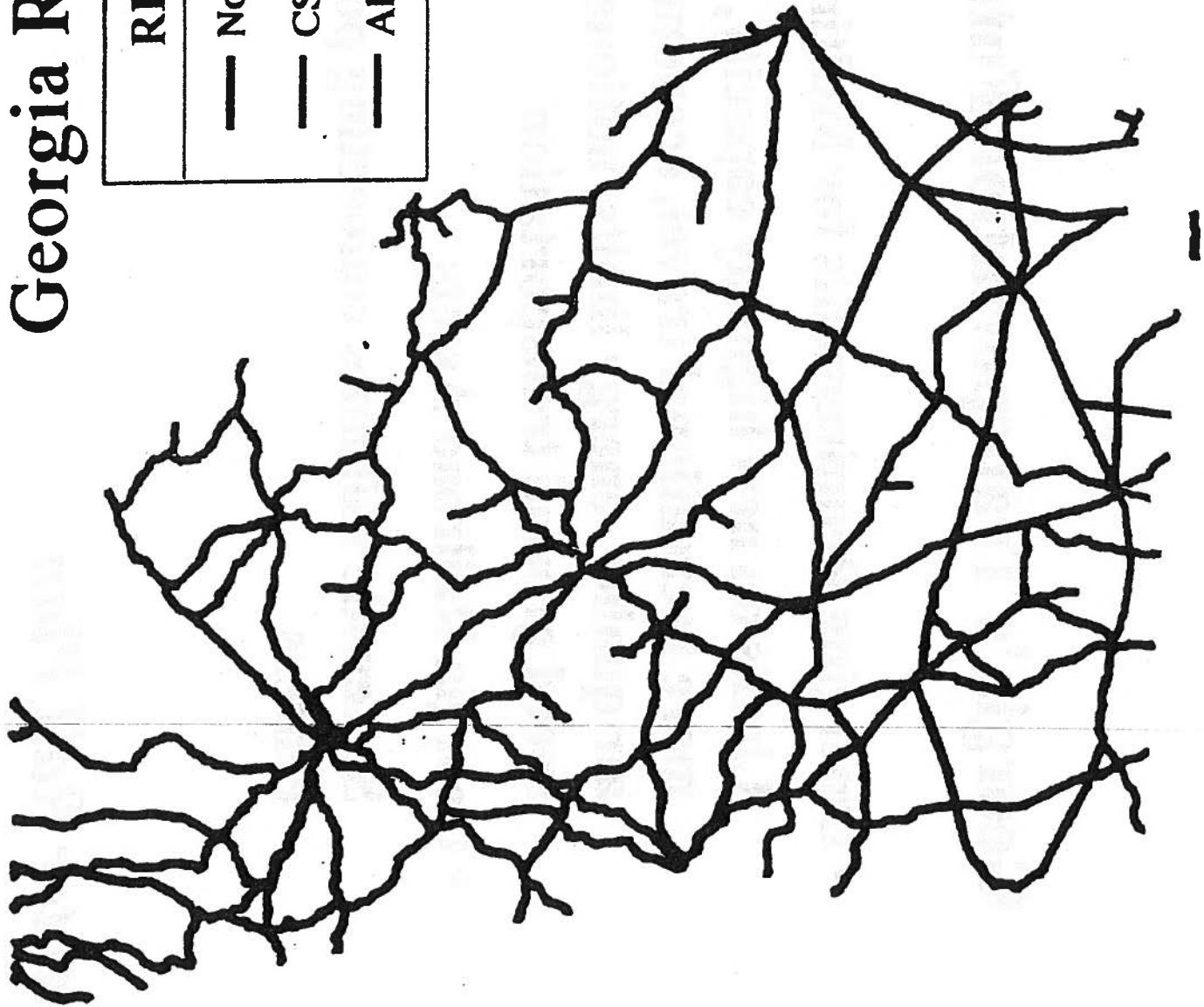
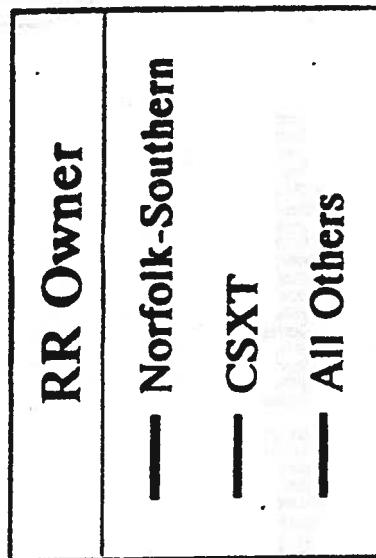
- Georgia Railroad Assets

Statewide rail lines connecting population centers



Commuter Rail Plan

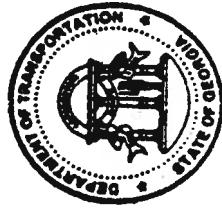
Georgia Rail Network



Addressing the Future

- Georgia Statewide Passenger Rail Plan
 - Linking population centers
 - Business/recreational/shopping/tourist trips
 - Travel schedules convenient for passengers
- Project Underway - Intercity Plan by 1996

Commuter Rail Plan



Addressing the Future

- **Metropolitan North Georgia Commuter Rail Plan**

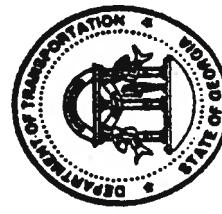
Work trips

To complement the highway system

To complement core transit systems

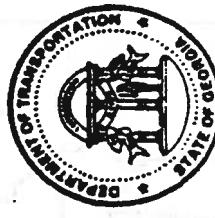
- **Commuter Rail Plan - January 1995**

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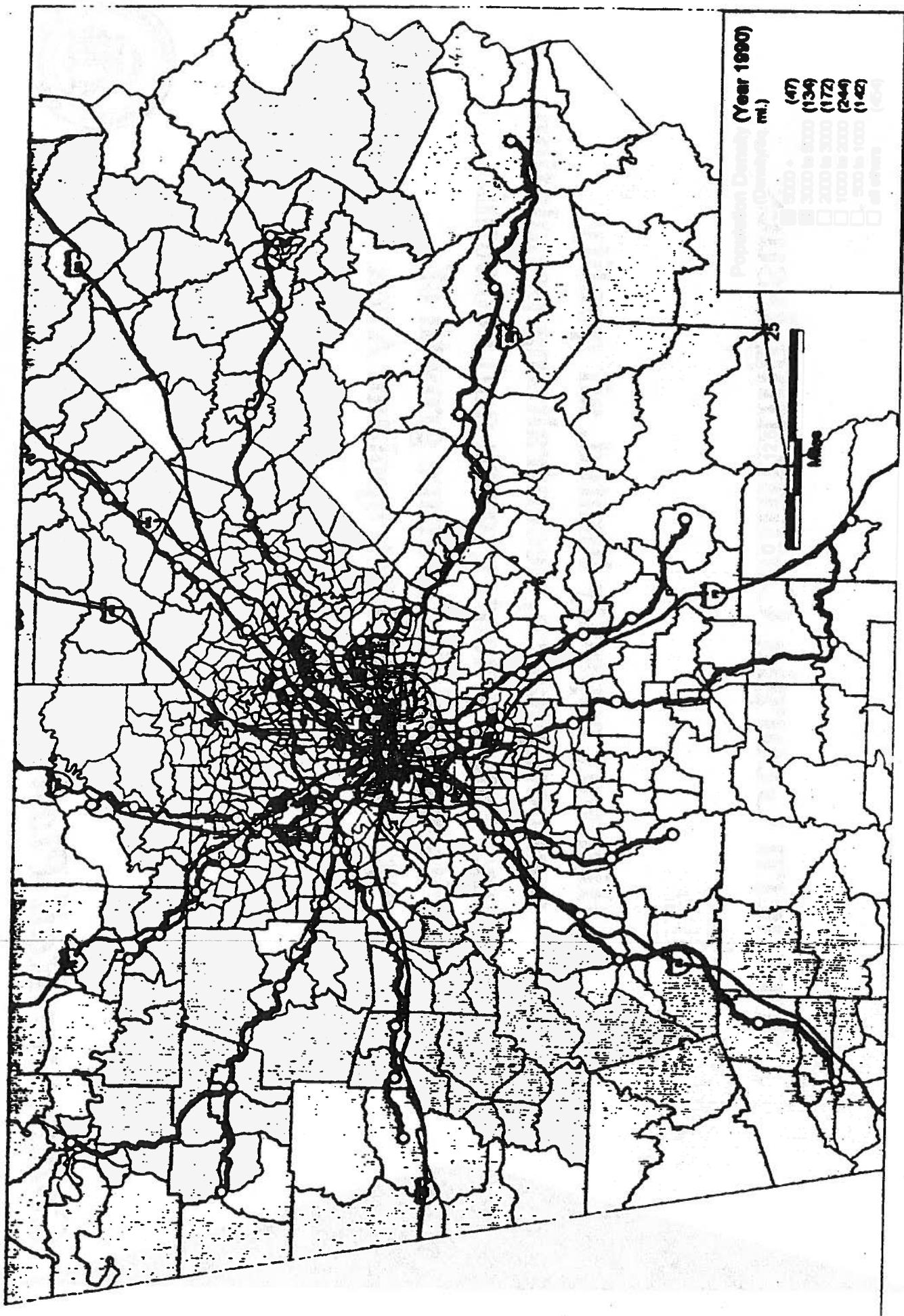
Northern Georgia Commuting Issues

- Highway capacity limited, air quality non-compliance, decentralizing population and employment, growth and economic vitality, maintain future growth of "World Class" Metropolitan Area

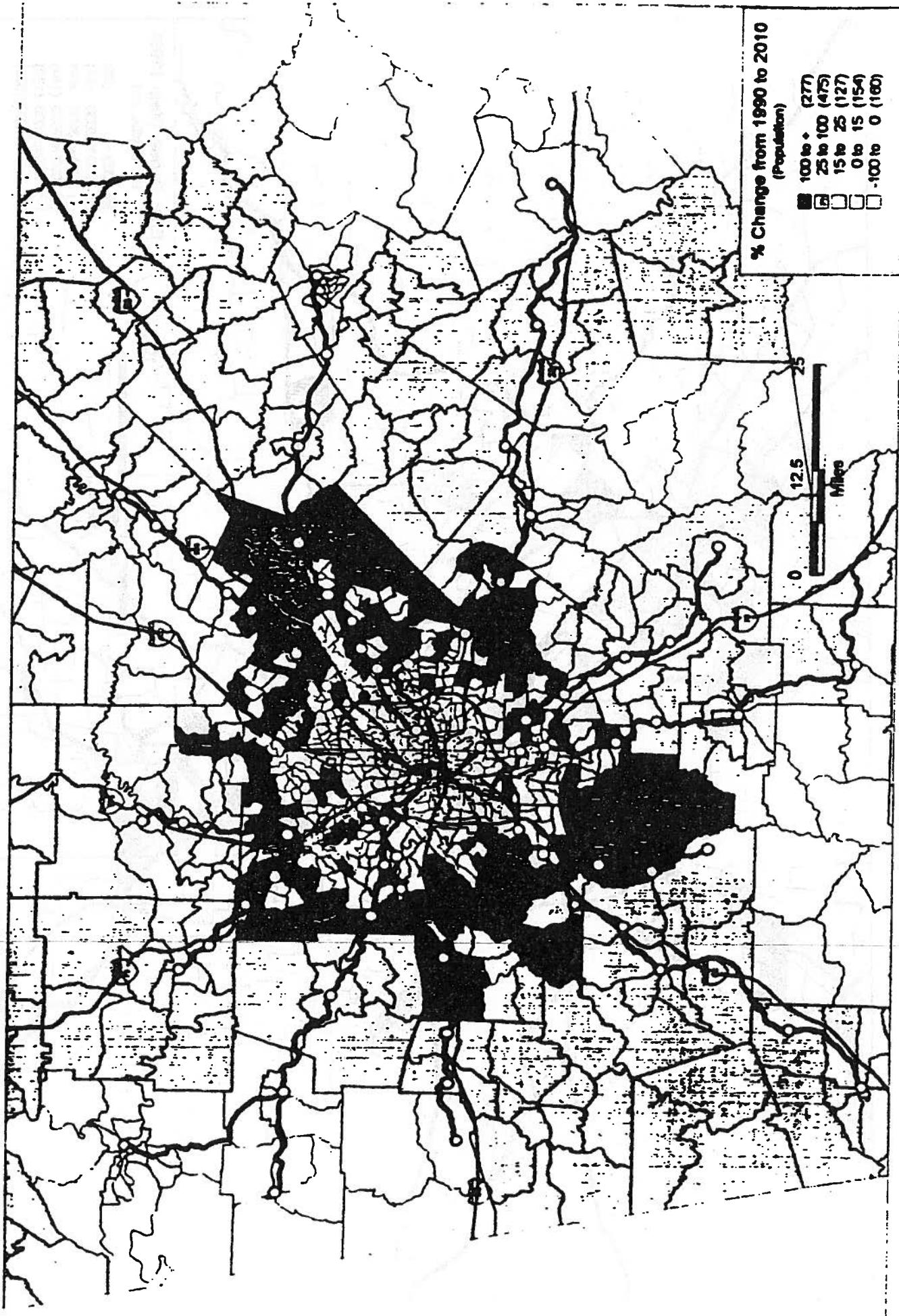


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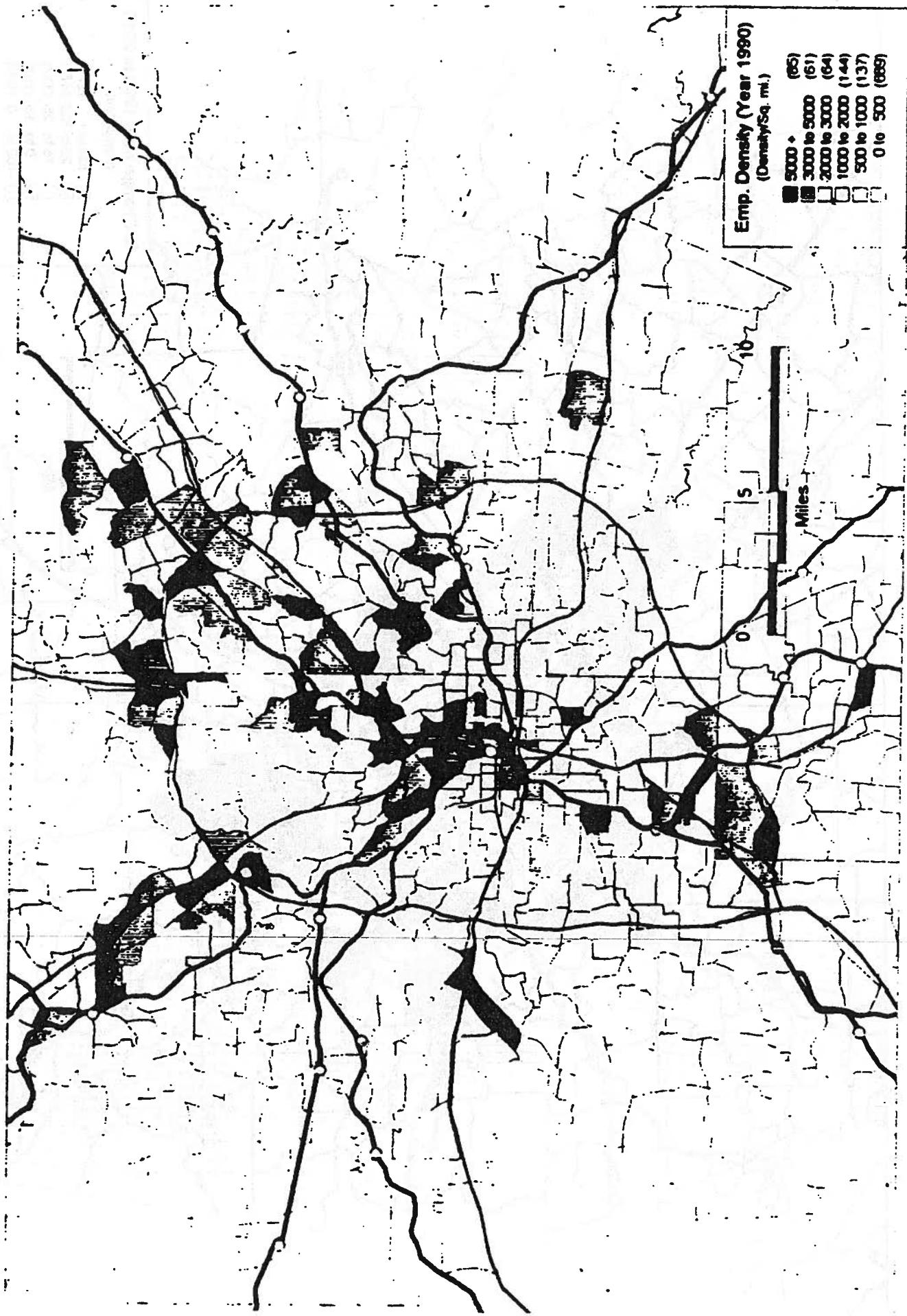
Population Density - 1990 - Study - Region



Change in Population Density - 1990 - 2010 - Study Region



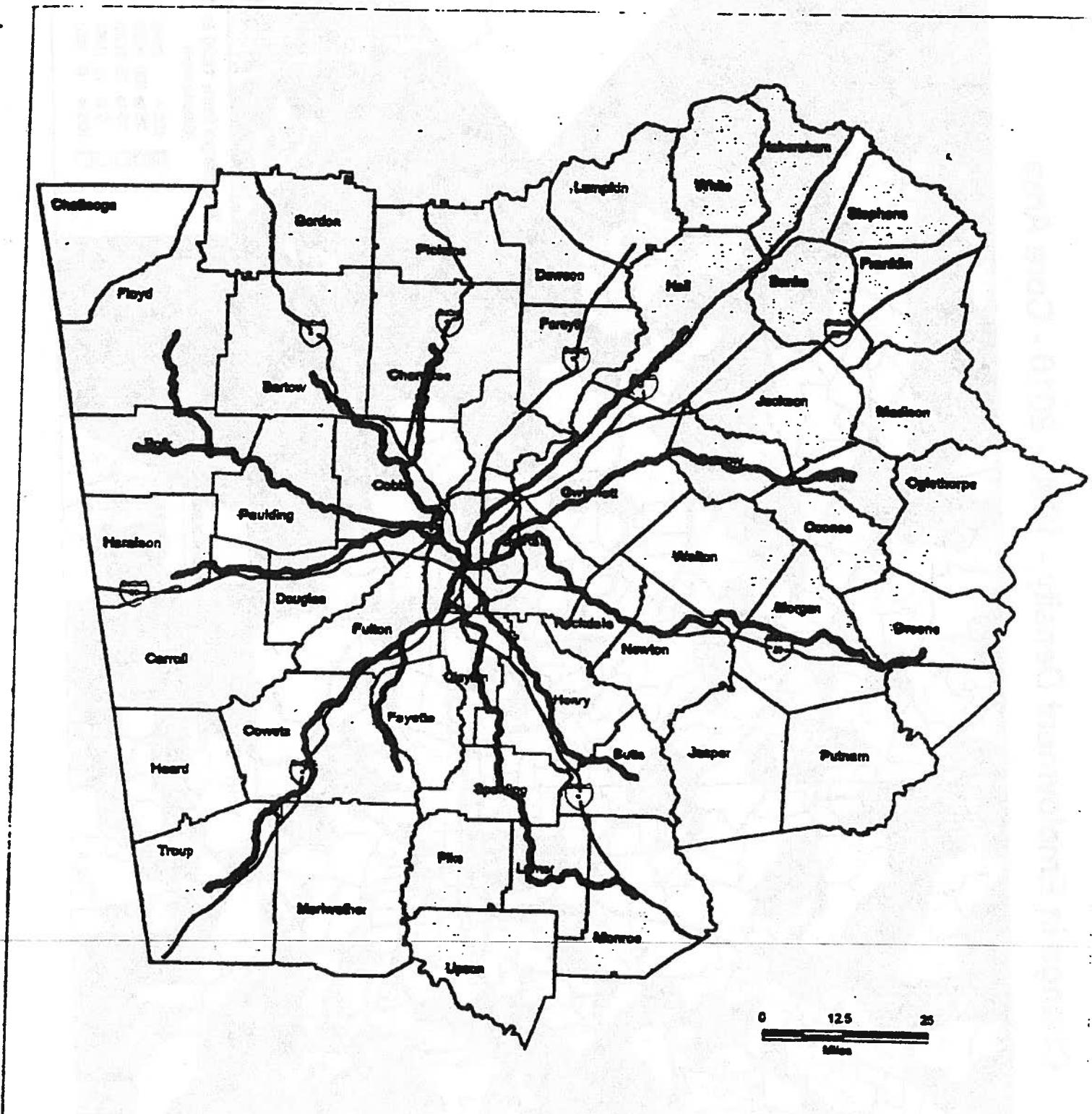
Employment Density - 1990 - Core Area



Change in Employment Density - 1990 - 2010 - Core Area



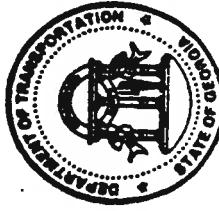
Study Region



Plan Development

- Twelve Railroad Corridors
- Develop Plan for Commuter Rail
- Work Trip Needs
- Support Regional Center
- Available Railroad Rights-of-Way
- MARTA for distribution
- Link Activity Centers

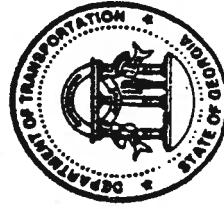
Commuter Rail Plan



Methodology-1

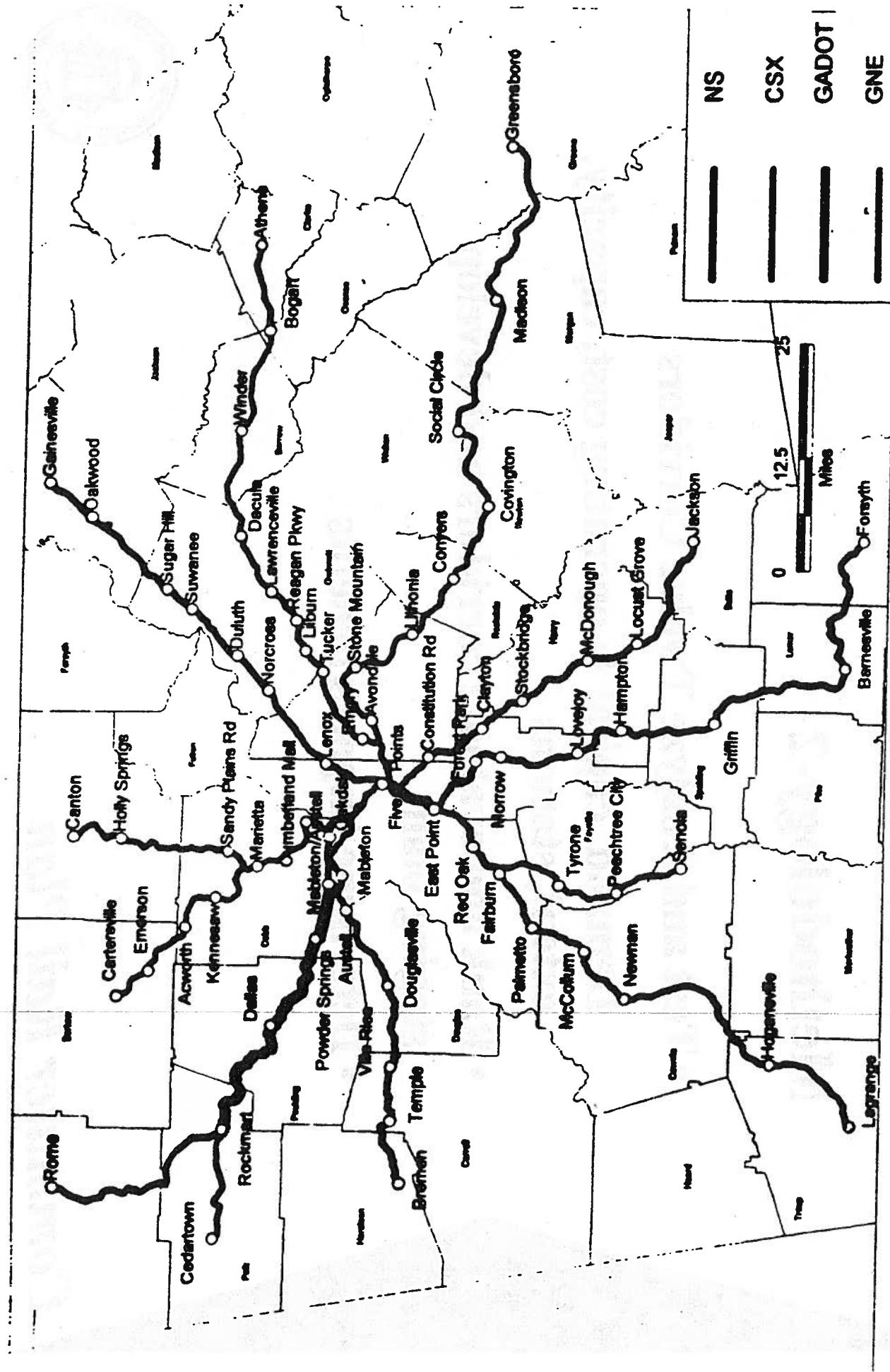
- Obtain data on travel behavior, railroad lines, socio-economic indicators
- Develop Travel Demand Models
- Conduct RAILSIM Operations Simulation
- Develop Operating Plans

Commuter Rail Plan



GADOT Commuter Rail Study

(Rail Line Ownership)



Methodology-2

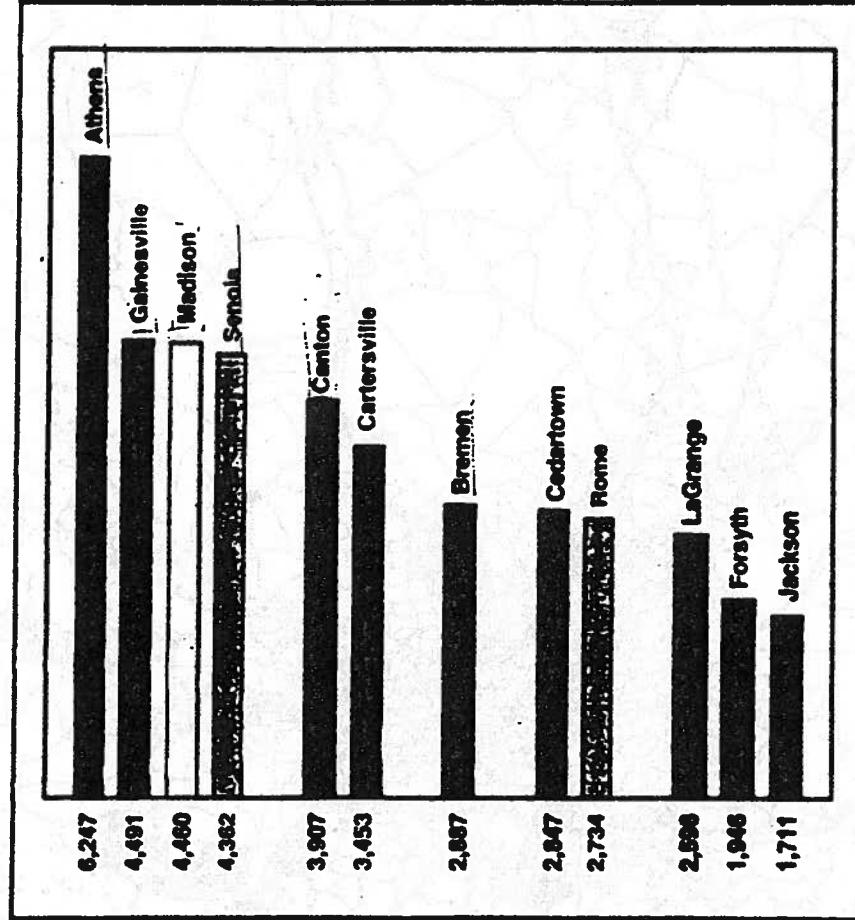
- Test and Analyze Twelve Corridors
- Demand, capital & operating cost, capacity, extent, stations
- Rank and evaluate corridors and develop staging plan
- Determine impacts/benefits



Commuter Rail Plan

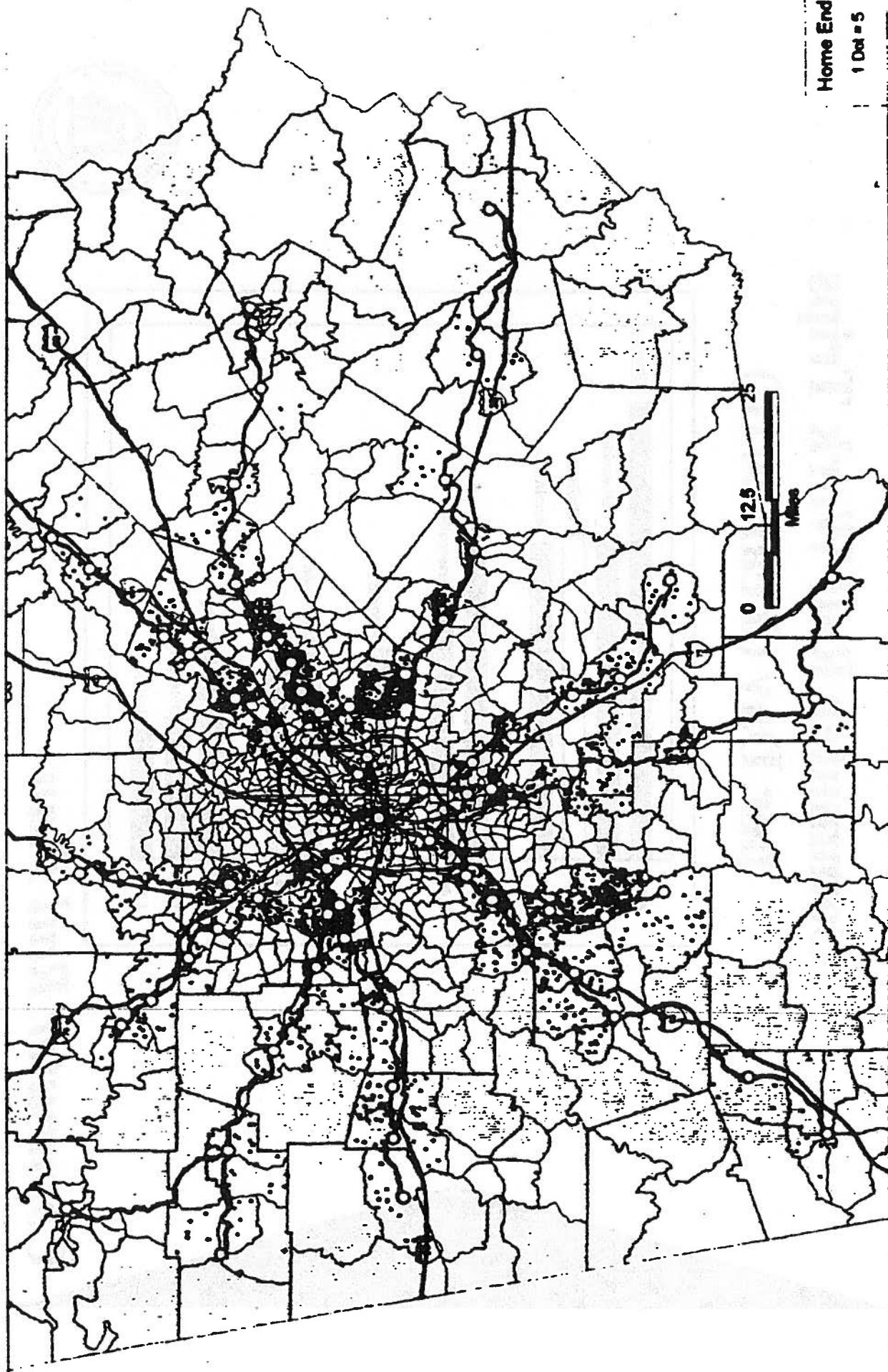


Commuter Rail Work Trips per Day (Year 2010)

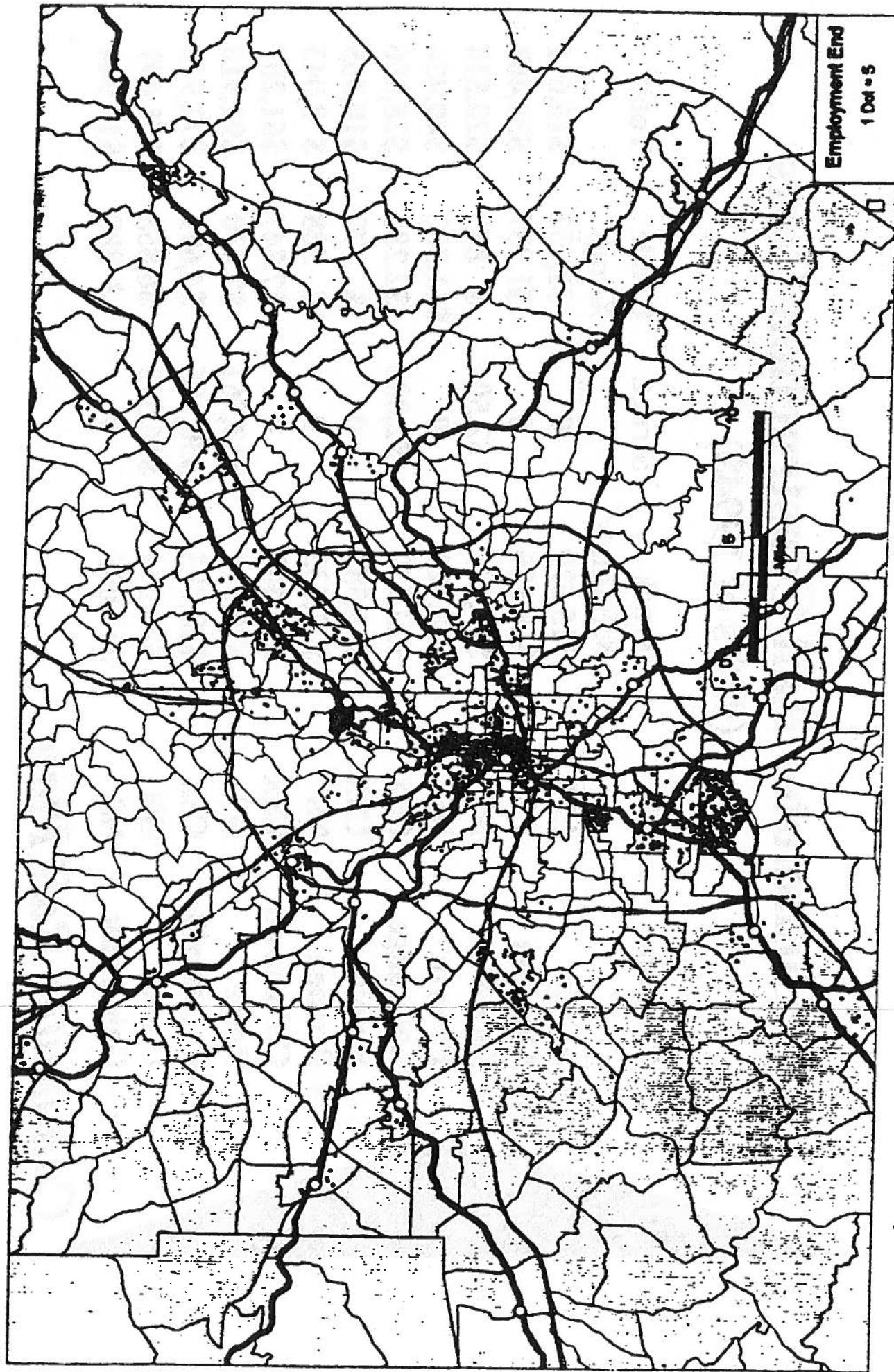


Commuter Rail Plan

Location of Commuter Rail Trip Productions



Location of Commuter Rail Trip Attractions - Core Area



Commuter Rail Construction Costs

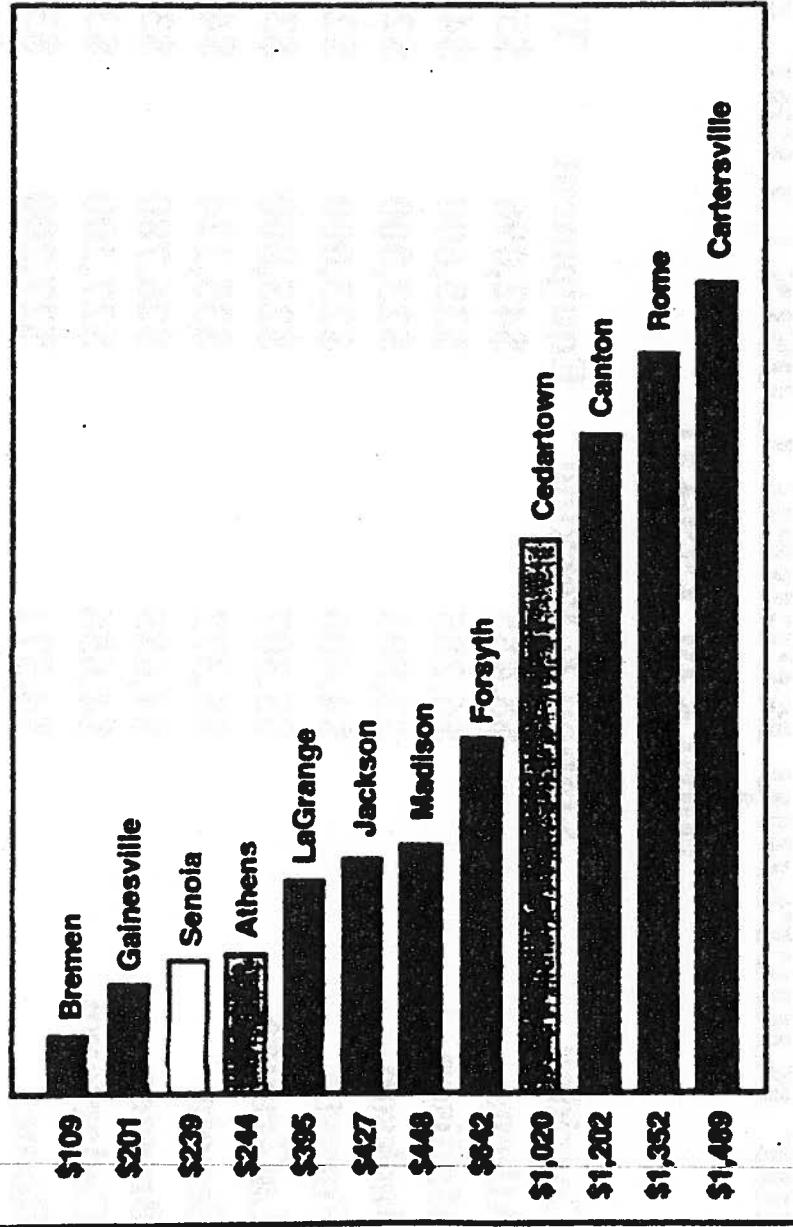
(000's of 1994\$)

Corridor	RR	Track	Struct.	Grade	Total
		& Signals	X-ings		
1. -> Athens	CSX	\$15,579	0	\$1,032	\$16,611
2. -> Madison	CSX	\$28,526	0	\$1,937	\$30,463
Jackson	NS	\$17,121	\$2,504	\$ 889	\$20,514
Forsyth	NS	\$38,123	0	\$11,303	\$49,426
LaGrange	CSX	\$23,770	\$2,000	\$2,286	\$28,056
Senoia	CSX	\$ 9,587	0	\$ 778	\$10,365
1. -> Bremen	NS	\$ 7,535	0	\$ 508	\$ 8,043
Cedartown	CSX	\$53,460	0	\$7,747	\$61,207
Rome	NS	\$70,519	\$13,961	\$7,430	\$91,910
Cartersville	CSX	\$38,095	\$30,185	\$4,699	\$72,979
2. -> Canton	GN	\$28,244	\$16,595	\$6,858	\$51,697
2. -> Gainesville	NS	\$19,055	0	\$ 889	\$19,944

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Commuter Rail Corridor Capital Construction

Cost per Mile (000's of 1994\$)



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Corridor Ridership Related Costs (Year 2010)

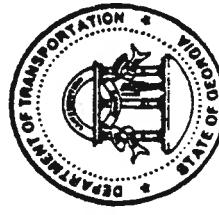
(000's of 1994\$)

Corridor	Station & Parking	Equipment	Total
Athens	\$8,485	\$42,096	\$50,581
Madison	\$6,285	\$35,600	\$41,885
Jackson	\$3,803	\$23,000	\$26,803
Forsyth	\$4,400	\$23,000	\$27,400
LaGrange	\$5,307	\$25,800	\$31,107
Senoia	\$5,372	\$35,124	\$40,496
Bremen	\$4,685	\$26,780	\$31,465
Cedartown	\$4,656	\$27,200	\$31,856
Rome	\$4,571	\$27,200	\$31,771
Cartersville	\$5,110	\$31,400	\$36,510
Canton	\$5,030	\$32,800	\$37,830
Gainesville	\$5,889	\$35,600	\$41,489

Commuter Rail Plan

Corridor Revenue & Operating Costs (Year 2010) (000's of 1994\$)

	Revenue	Operating Costs	Revenue/ Oper. Cost
Athens	\$4,356	\$8,614	51%
Madison	\$3,516	\$7,385	48%
Jackson	\$1,273	\$4,140	31%
Forsyth	\$1,620	\$5,636	29%
Senoia	\$3,628	\$5,019	72%
LaGrange	\$1,836	\$5,628	33%
Bremen	\$2,030	\$5,215	39%
Cedartown	\$1,819	\$5,676	32%
Rome	\$1,673	\$6,346	26%
Cartersville	\$2,207	\$5,625	39%
Canton	\$2,416	\$4,543	53%
Gainesville	\$3,043	\$6,634	46%



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Key Corridor Evaluation Criteria

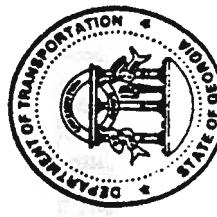
Annualized Cost per Rider =

$$\frac{\text{Total Capital Costs} + \text{Annual Operating Costs}}{10} / \text{Annual Riders}$$

Farebox Recovery =

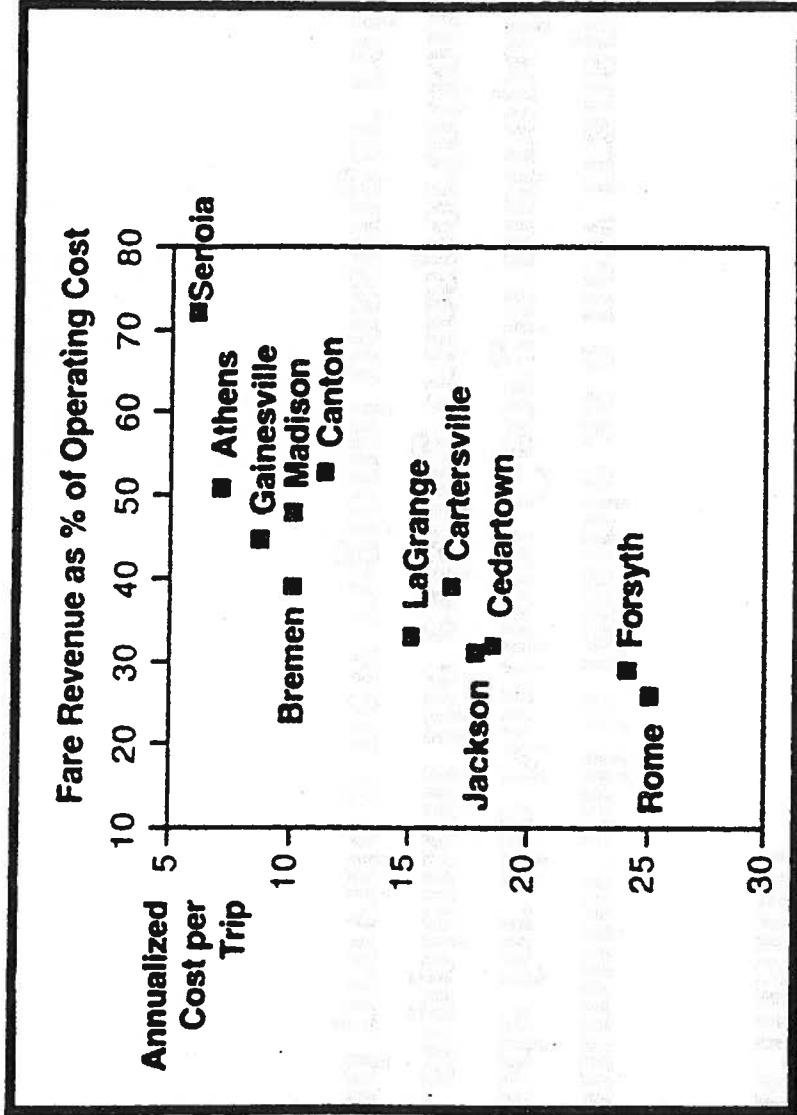
$$\frac{\text{Revenue From Fares}}{\text{Operating Costs}}$$

Commuter Rail Plan



Commuter Rail Plan

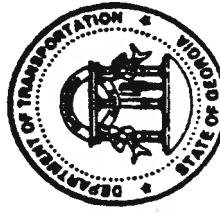
Twelve Corridor Comprehensive Comparison



Commuter Rail Plan

Conclusion

- Commuter rail is feasible as a new transportation mode for the Northern Georgia metropolitan area to supplement the existing transportation systems and provide a new regional passenger rail service.



Developing the Staging Plan

- Several feasible approaches to staging:

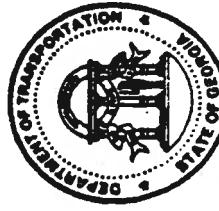
Single corridor at a time

Multiple corridors simultaneously

- Have chosen one approach that is geographically balanced and has two phases over a 15 year period

Phase 1 - 3 lines open by Year 2000

Phase 2 - 3 further lines open by Year 2010

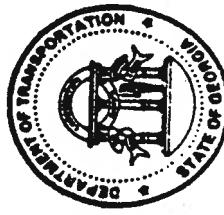


Commuter Rail Plan

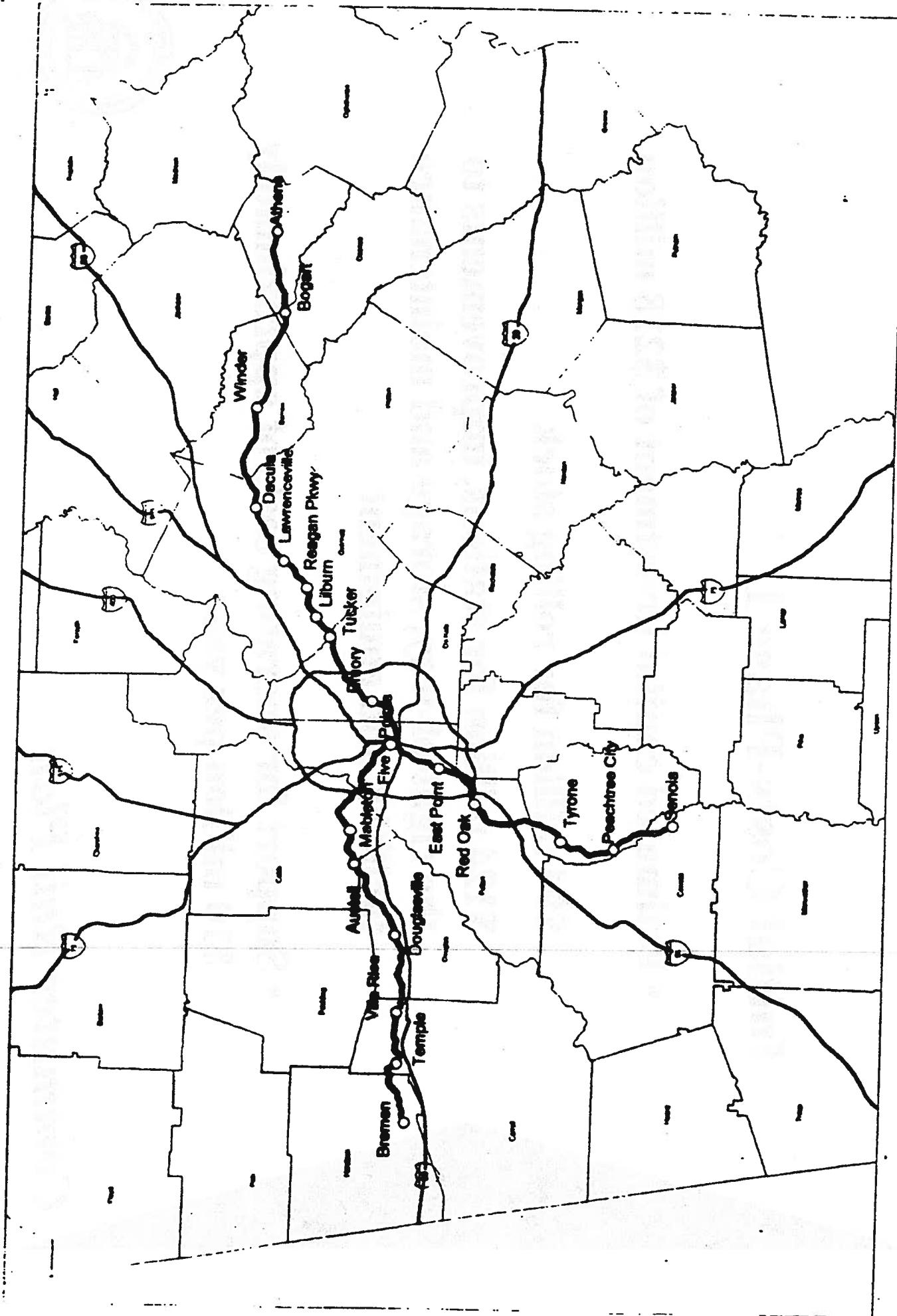
Commuter Rail Plan

Initial Service-Phase 1

- An initial service plan could be implemented within 4 years of a decision to go forward with staged service to Athens, Senoia and Bremen on 3 lines with 20 stations and 1 downtown transfer station in 12 counties serving over 5,600 riders daily or 11,200 daily work trips (year 2000 estimates).

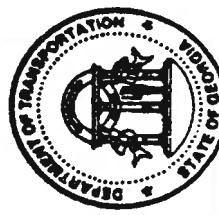


PHASE 1 - Commuter Rail Lines



Initial Costs-Phase 1

- Estimated capital investment of \$218 million
 - \$94 million for rolling stock
 - \$124 million for stations, improvements to the right-of-way, storage and maintenance facilities and equipment
- Support for operating costs of approximately \$10 million per year



Commuter Rail Plan

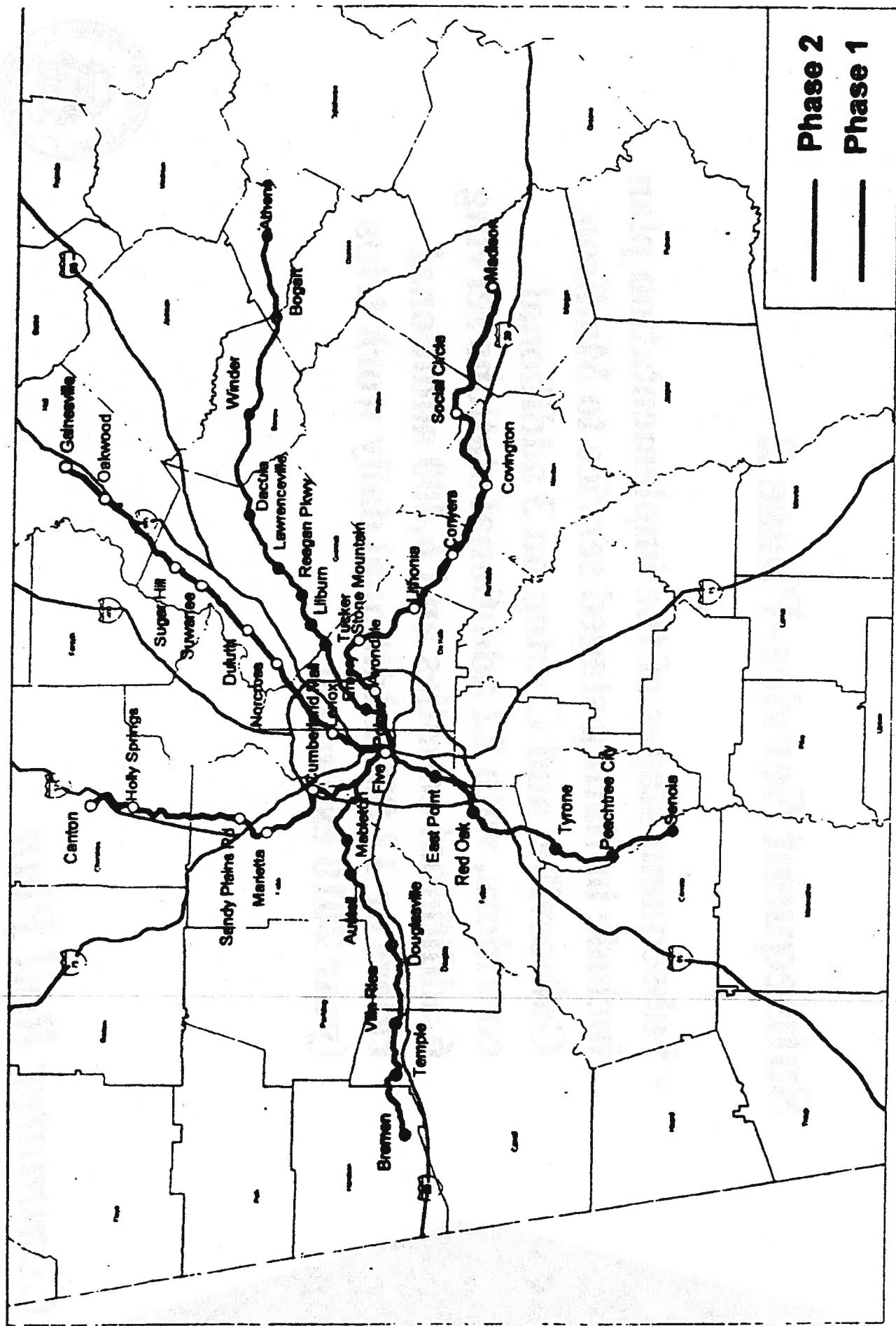
Commuter Rail Plan

Subsequent Service-Phase 2

- Subsequent stages of the implementation plan include initiating staged service to Madison, Gainesville, and Canton on 3 additional corridors, with 22 additional stations serving 6 additional counties and 6,400 additional riders or 12,800 additional daily work trips (year 2010 estimate).

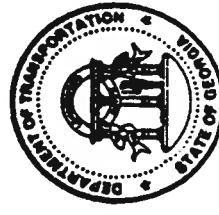


PHASE 2 - Commuter Rail Lines



Subsequent Costs-Phase 2

- Estimated capital investment of \$263 million
 - \$114 million for rolling stock
 - \$119 million for stations, improvements to the right-of-way, storage and maintenance facilities, and equipment
 - \$30 million for expansion of common facilities
- Additional support for operating costs of approximately \$8 million per year



Commuter Rail Plan

Six Lines In Service

- Commuter rail service to 40 stations, in 18 counties with a year 2010 population of 4,213,330 -- 76% of the total 50 county study area year 2010 population of 5,572,730
- The population of the 18 counties with stations is expected to be more than 50% of the year 2010 State of Georgia population.
- In current dollars the cost of the overall plan for 2010 levels of ridership is \$480 million with annual operating support of \$18 million per year.

Commuter Rail Plan



Commuter Rail Plan



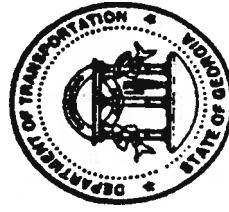
Assumed Features-1

- Powered by modern diesel passenger locomotives
- Bi-level cars with high capacity, comfortable seating
- Mini-high platforms for handicapped accessibility
- Three morning and three afternoon peak period trains, a 40 minute headway and stopping at every station
- Mid-day and evening service on each line so that commuters can have flexibility in their schedules

Assumed Features-2

- Stations with access from streets and highways, pedestrian paths, bicycle storage, kiss-ride and bus
- Adequate parking to avoid constraints
- Sales primarily by ticket vending machines
- Random fare inspection on the cars
- One-way, round trip, weekly and monthly rides
- Credit and debit cards accepted for ticket sales

Commuter Rail Plan



Assumed Features-3

- Trains will go to a transfer station at Five Points with easy and convenient access to MARTA
- Transfers to MARTA rapid transit also available at East Point, Lenox, and Avondale
- Transfers to bus services available at Cumberland and Marietta (CCT), Emory and the Downtown Transfer Station (MARTA bus), Gainesville and Athens (ATS and UGA)

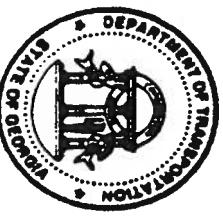
Commuter Rail Plan



Commuter Rail Benefits

- Enhance economic development
- Increase private productivity
- Create jobs and dollars
- Reduce air pollution
- Increase regional mobility/capacity

Commuter Rail Plan



Benefits: Patterns of Economic Development

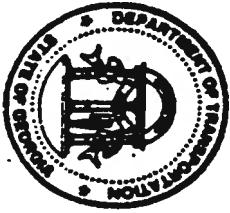
- Commuter Rail can strengthen downtown Atlanta as the economic center of the region
- Attract private investment to station locations, putting a premium on property values near stations and spurring development
- Increased land values along commuter rail lines



Benefits: Jobs

- Implementing the entire plan will create over 10,000 jobs with a total payroll of over \$500 million
- Construction jobs with a \$150 million payroll
- Supplier jobs with a \$120 million payroll
- Service sector jobs with a \$250 million payroll
- Operations and maintenance jobs with a \$15 million payroll

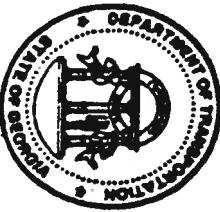
Commuter Rail Plan



Benefits: Pollution Impacts

- The US Environmental Protection Agency (EPA) has rated Atlanta's air quality problem as "serious"
- Atlanta exceeds EPA's standards for ground-level ozone
- Implementing the commuter rail plan would reduce air emissions of the following pollutants:
 - ✓ 87.9 tons of HC (hydrocarbons)
 - ✓ 1080 .0 tons of CO (carbon monoxide)
 - ✓ 238.6 tons of NOx (nitrogen oxides)

Commuter Rail Plan



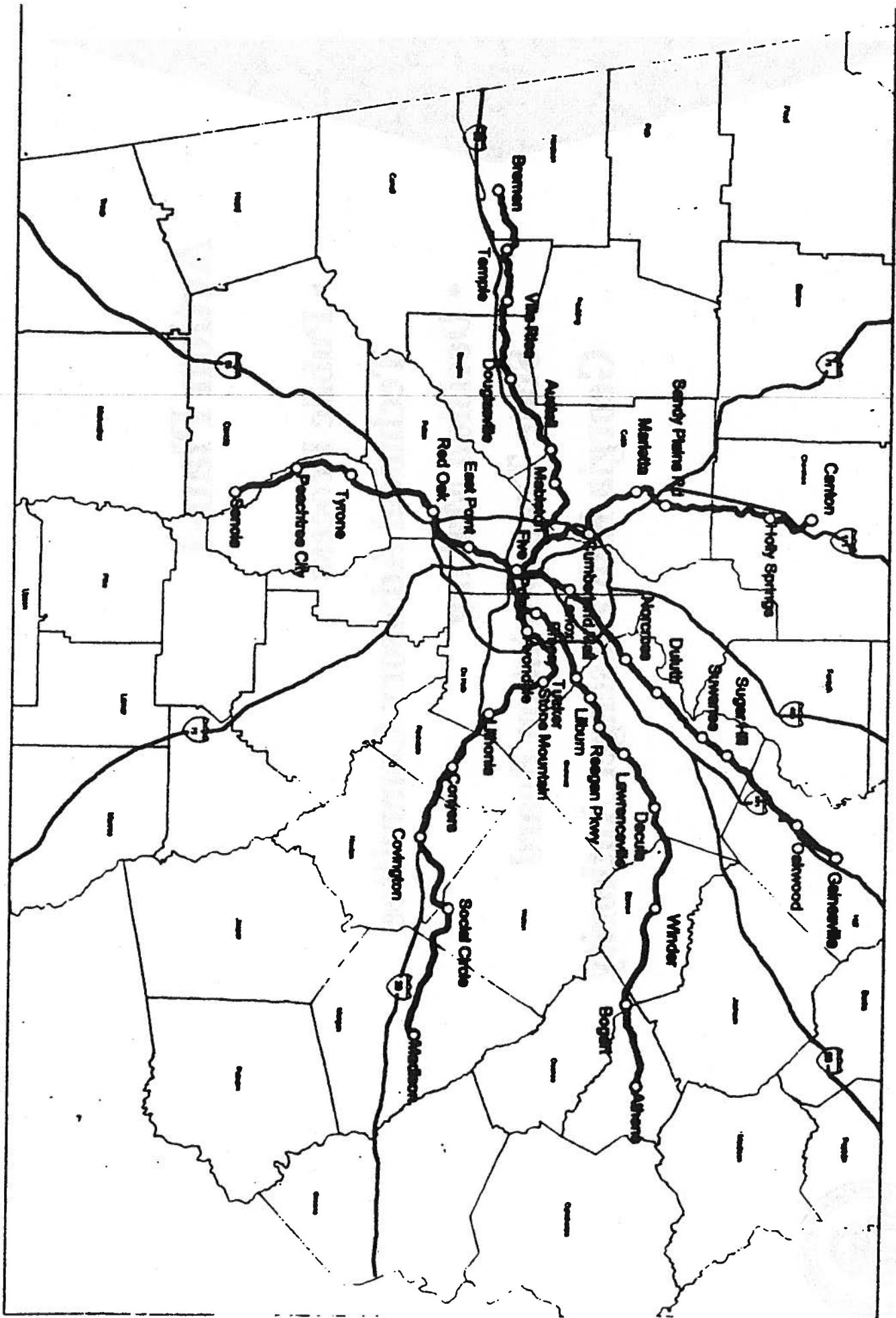
Benefits: Capital Costs/Capacity - Commuter Rail and Highways

- Implementing the plan will provide the equivalent capacity of six (6) lanes of highway in the center of the region which could cost approximately \$285 million to construct, not including the cost of right-of-way and the economic loss of the property taken.

Commuter Rail Plan



PHASE 1 and PHASE 2 - Commuter Rail Lines



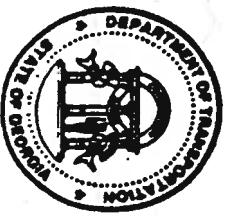
Action Plan-1

- Public Process
- Technical Advisory Committee
- Decision Making

State Transportation Board

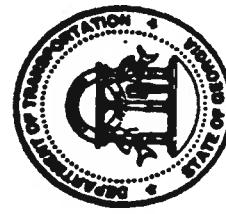
Georgia Rail Passenger Authority

Commuter Rail Plan



Action Plan-2

- Financial Plan-Federal, State and Regional Resources
- Railroad Negotiations
- Department/Authority-Roles and Responsibilities
- Meeting Federal Project Requirements
- Environmental
- Major Investment Analysis



Commuter Rail Plan

APPENDIX B

Conceptual Stage Study